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**PROGRESS REPORT OPERABLE UNIT 2 OTHER
WASTE UNITS JULY 1992**

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HANDOUT



Fernald Project

Remedial Investigation/ Feasibility Study

3643

PROGRESS REPORT

JULY 1992

Operable Unit 2 OTHER WASTE UNITS

Johnny Reising
DOE Manager,
Operable Unit 2
738-9083

Introduction

The Remedial Investigation/Feasibility Study (RI/FS) is the blueprint for cleanup at the U.S. Department of Energy's Fernald Environmental Management Project (FEMP). The nature and extent of contamination at the FEMP and surrounding areas is being thoroughly investigated so that appropriate remedial actions can be formulated and implemented.

The FEMP has been divided into five sections, known as Operable Units, for environmental investigation and cleanup. The Operable Units were defined based on their location or the potential for similar technologies to be used in the ultimate cleanup.

During the course of the RI/FS effort, certain conditions are occasionally identified which call for more immediate action. These actions are called "Removal Actions" and are initiated when there is a need to accelerate cleanup activities to address releases or potential releases of hazardous substances. Removal Actions are coordinated with the U.S. EPA and the Ohio EPA.

Following is a progress report on Operable Unit 2 including its history, the current status of RI/FS activities, cleanup alternatives under consideration, and work being done to alleviate near-term concerns.

Background

Operable Unit 2 includes the sanitary landfill, lime sludge ponds, inactive flyash disposal area, active flyash pile and the southfield area. These areas were used to dispose of flyash, spent lime, sanitary waste and construction rubble from past operations at the FEMP. Operable Unit 2 contains large volumes of waste materials with relatively low concentrations of radioactive and chemical contaminants. While uranium is the primary contaminant, investigations are in progress to confirm that elevated concentrations of other hazardous constituents are not present within Operable Unit 2 facilities.

RI/FS Activities

Sampling: Samples from all of the Operable Unit 2 waste facilities have been analyzed for radiological and chemical constituents. Analytical data from the off-site laboratory has been validated. Data results are now being used to support the Operable Unit 2 RI/FS, waste treatment studies and ongoing modeling efforts. These samples were collected to supplement existing characterization data available for these facilities.

Validated analytical data is presently being incorporated into the Remedial Investigation Report to evaluate the potential risks to public health and the environment associated with the existing conditions within Operable Unit 2 facilities. This baseline risk assessment will be used to help establish remedial action objectives for Operable Unit 2 waste facilities.

Analyses of soil samples taken from the Firing Range found above-background levels of lead contamination in soils. The Firing Range is an isolated area formerly used by site armed security personnel for weapons qualifications. Air monitoring is planned at the Firing Range to determine if lead-contaminated soils have the potential to become airborne and pose a risk to human health and the environment. This additional air monitoring data is required to evaluate the need for near-term cleanup action at the Firing Range.

Reports: Treatability studies to establish whether identified waste treatment technologies are effective when applied to FEMP waste material are complete for Operable Unit 2. Data generated by the study will be used to support Operable Unit 2 treatment technology selection and remedy implementation.

Operable Unit 2 treatability investigations were focused on the application of cement-based solidification to Operable Unit 2 waste material. A three-stage treatability study was completed at the IT Environmental Technology Development Center in

April 1992. The final stage of treatability involved leachate analysis and permeability testing. A Draft Treatability Study Report was completed in May 1992. The Draft Remedial Investigation (RI) Report for Operable Unit 2 is currently under revision. The RI report is due to the U.S. EPA October 19, 1992. The purpose of the RI is to provide a summary of field investigations and to support the Feasibility Study for Operable Unit 2.

The compilation of other Operable Unit 2 RI/FS reports, including the Feasibility Study Report, are proceeding consistent with the schedules set forth in the 1991 Amended Consent Agreement.

Remedial Design: Examination of remedial alternatives for each Operable Unit 2 waste unit is ongoing. Conceptual design engineering was initiated for purposes of establishing preliminary design parameters and cost estimates. This work is necessary to provide for the prompt implementation of remedial action following issuance of the Record of Decision for Operable Unit 2.

Removal Actions

Inactive Flyash Pile Control (Removal Action No. 8): The objective of this Removal Action is to limit access to the Inactive Flyash Pile/Other South Field Disposal Areas while final remedial alternatives for these areas are being studied. This Removal Action was completed with the installation of warning signs and a chain-link barrier around the perimeter of the Inactive Flyash Pile/Other South Field Disposal Areas.

Inactive Flyash Pile (Removal Action No. 23): This Removal Action, which is a continuation of Removal Action No. 8, focuses on isolated areas of radiological surface contamination in the Inactive Flyash Pile/Other South Field Disposal Areas. A field investigation to determine if select locations within the Inactive Flyash Pile/Other South Field disposal areas require further action has been

completed. The results of the investigation and other appropriate documentation were submitted to the U.S. EPA and the Ohio EPA on June 30, 1992.

Active Flyash Pile Controls (Removal Action No. 10): The objective of this Removal Action was to mitigate potential wind and water erosion at the Active Flyash Pile. This Removal Action was completed in late June 1992, with the installation of a silt fence around the base of the pile to mitigate stormwater runoff, and the placement of wind barriers to mitigate wind erosion. Minor grading and compaction were conducted and a chemical spray was also applied to the surface of the Active Flyash Pile to further mitigate the possibility of wind erosion and provide surface stabilization. A large portion of the pile is now inactive and will not receive new ash deposits.

Cleanup Alternatives

Several cleanup options have been evaluated for Operable Unit 2. One method would entail placing a cover over the wastes to cap them in place and prevent stormwater runoff from carrying contaminants to groundwater and surface waterways.

Under a second alternative, contaminated water located beneath the waste units would be isolated, removed, and treated before being discharged to the Great Miami River. Then a cover would be placed over the waste units as a final step.

Other options include removing the waste, treating it, and either disposing of it in an engineered structure at the FEMP or transporting it to an approved off-site waste disposal facility.

More information about Operable Unit 2 is available in the Public Environmental Information Center (PEIC), where Fernald Environmental Management Project cleanup documents are kept in the Administrative Record. The PEIC is located in the JAMTEK building, 10845 Hamilton-Cleves Highway, Harrison, Ohio, 45030. The telephone number is (513) 738-0164.